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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
MCCARTNEY, LINZY T	

ART UNIT	PAPER NUMBER
2671	

DATE MAILED: 04/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/885,218	CAPERS, WALTER E.	
	Examiner	Art Unit	
	Linzy McCartney	2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-52* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-14,17-22,26-28,33 and 35-49* is/are rejected.

7)☒ Claim(s) *7,16,23-25,29-32,34 and 50-52* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *6/20/01* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 6/2/03 fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. It appears that an information disclosure statement was filed with this application, however it is not within the application file wrapper. The Applicant is advised to send a copy of the information disclosure statement to the Office.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 3-6, 11-14, 26-28, 33, and 35-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,184,908 to Chan et al. (Chan) further in view of Rule, "3D Graphics File Formats" (Rule).

a. Referring to claim 1, Chan discloses generating graphics instructions which define image-related characteristics of a first 3-D image frame, wherein a graphics instruction can be used to instruct a display software to render a characteristic of a 3-D image frame (column 3, lines 10-28; column 5, lines 42-47); generating image commands corresponding to the graphics instructions the image commands including graphics instruction reference data and graphics instruction argument data (column 3, lines 66 – column 4, lines 7). Chan does not explicitly disclose transferring the image commands to

an output 3-D image file or the output file includes information to instruct the display software to display the original 3-D image frame so as to be viewable from multiple viewpoints. Rule discloses transferring the image commands to an output 3-D image file wherein the output file includes information to instruct the display software to display the original 3-D image so as to be viewable from multiple viewpoints (page 28, paragraph 1; page 47, paragraph 3). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the method of Chan by outputting image commands to an output 3-D image file as taught by Rule. The suggestion/motivation for doing so would have been because it would allow data to be interchanged between 3D applications (Rule, page 1, paragraph 3- page 2, paragraph 1).

b. Referring to claim 3, Chan does not explicitly disclose the step of link a library including a set of procedures containing storage information and rendering information for each of the graphics instructions. Rule discloses the step of link a library including a set of procedures containing storage information and rendering information for each of the graphics instructions (page 5, paragraph 1-3; page 8, Fig. 2.1; page 25, paragraph 2-4).

b. Referring to claim 4, Chan discloses translating each of the commands into graphics instructions concurrently with the storage of the commands (column 3, lines 54-59).

c. Referring to claim 5, Chan does not explicitly disclose wherein the display software includes a rendering tool. Rule discloses wherein the display software includes a rendering tool (page 400, paragraph 6).

d. Referring to claim 6, Chan does not explicitly disclose the step of rendering a sequence of image with the rendering tool, said rendering tool using the instructive information stored in the output 3-D image file. Rule discloses the step of rendering a sequence of image with the rendering tool, said rendering tool using the instructive information stored in the output 3-D image file (page 37 and page 38; Fig. 3.1).

d. Referring to claim 11, Chan discloses the command containing graphics instruction reference data and graphics instruction argument data (column 4, lines 19-29). Chan does not explicitly disclose using the movie file command to reference a corresponding graphics library instruction template, building a graphics instruction by linking the graphics instruction data to the graphics library instruction template; and executing the graphics instruction using a display using a display software; wherein the graphics instruction contains information for rendering a characteristic of a 3-D image so as to be viewable from multiple viewpoints. Rule discloses using the movie file command to reference a corresponding graphics library instruction template, building a graphics instruction by linking the graphics instruction data to the graphics library instruction template (page 5, paragraph 1-3; page 8, Fig. 2.1; page 25, paragraph 2-4) and executing the graphics instruction using a display using a display software; wherein the graphics instruction contains information for rendering a characteristic of a 3-D image so as to be viewable from multiple viewpoints (page 28, paragraph 1; page 47, paragraph 3).

e. Referring to claim 12, Chan does not explicitly disclose repeating steps (a)-(d). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the invention of Chan by repeating steps (a)-(d). The

suggestion/motivation for doing so would have been because it would be necessary to render all the generated frames.

f. Referring to claim 13, Chan does not explicitly disclose wherein a frame is composed of the plurality of movie file commands. Rule discloses wherein a frame is composed of the plurality of movie file commands (page 37 and 38, sourcecode).

g. Referring to claim 14, Chan does not explicitly disclose the steps of reading a main file header. Rule discloses the steps of reading a main file header (page 200, paragraph 1).

d. Referring to claim 26, Chan discloses a translation application for translating a data set into graphics instructions, the data set containing information about the contents of at least one 3-D image, and each graphics instruction containing information for instructing a display software to display a characteristic of a 3-D image (column 3, lines 10-28; column 5, lines 42-47); a graphics converter for converting the graphics instructions into movie file commands, each movie file command including a reference to a corresponding graphics instruction and graphics instruction argument data (column 3, lines 66 – column 4, lines 7). Chan does not explicitly disclose a movie file recorder for recording a plurality of movie file commands in an output 3-D image file or wherein the output 3-D image file contains information for instructing rendering software to render a 3-D imagery, so as to be viewable from multiple viewpoints. Rule discloses a movie file recorder for recording a plurality of movie file commands in an output 3-D image file or wherein the output 3-D image file contains information for instructing rendering software

to render a 3-D imagery, so as to be viewable from multiple viewpoints (page 28, paragraph 1; page 47, paragraph 3).

e. Referring to claim 27, Chan does not explicitly disclose wherein the movie file commands include integer representations of graphics instructions. Rule discloses wherein the movie file commands include integer representations of graphics instructions (page 40, paragraph 6).

f. Referring to claim 28, Chan does not explicitly disclose wherein the movie file commands are first written to a buffer and subsequently transferred from the buffer to the output 3-D image file. Rule discloses wherein the movie file commands are first written to a buffer and subsequently transferred from the buffer to the output 3-D image file (page 28, paragraph 1).

g. Referring to claim 33, Chan does not explicitly disclose a graphics library hash table for referencing a movie file command to a graphics instruction, the movie file command containing a reference to a graphics instruction and argument data for the graphics instruction, and the graphics instruction including information for instruction including information for instructing a display software to display a characteristic of a 3-D image so as to be viewable from multiple viewpoints or a movie manage connected to the display software for translating a movie file command into a graphics instruction by referencing the corresponding graphics instruction on the graphics library hash table; and the display software for displaying the graphics instruction. Rule discloses a movie file command containing a reference to a graphics instruction and argument data for the graphics instruction, and the graphics instruction including information for instruction

including information for instructing a display software to display a characteristic of a 3-D image so as to be viewable from multiple viewpoints or a movie manage connected to the display software for translating a movie file command into a graphics instruction by referencing the corresponding graphics instruction and the display software for displaying the graphics instruction (page 28, paragraph 1; page 47, paragraph 3). It would have been obvious to one of ordinary skill in the art to use a hash table, Official Notice taken. The suggestion/motivation for doing so would have been because hash table provide efficient access to data.

h. Referring to claim 35, Chan does not explicitly disclose wherein reference to the graphics instruction is an integer and wherein that integer is referenced in the corresponding movie file command. Rule discloses wherein reference to the graphics instruction is an integer and wherein that integer is referenced in the corresponding movie file command (page 40, paragraph 6).

i. Referring to claim 36, Chan does not explicitly disclose wherein the display software includes graphics rendering tool. Rule discloses wherein the display software includes graphics rendering tool (page 38, Figure 3.1).

j. Referring to claim 37, Chan does not explicitly disclose wherein the graphics rendering tool renders a plurality of graphics instructions in a sequence. Rule discloses wherein the graphics rendering tool renders a plurality of graphics instructions in a sequence (page 36-37, example VRML file; page 38, Figure 3.1).

k. Referring to claim 38, Chan does not explicitly disclose wherein the instructions are OpenGL instructions. Rule discloses wherein the instructions are OpenGL instructions (page 5, paragraph 3).

l. Referring to claim 39, Chan discloses a translation application for translating a data set into graphics instructions, (column 3, lines 10-28; column 5, lines 42-47); a graphics converter for converting the graphics instructions into movie file commands, the graphics instruction including information for instructing a display software to display a characteristic of a 3-D image, and the movie file command including graphics instruction reference information to a corresponding graphics instruction and graphics instruction argument data (column 3, lines 66 – column 4, lines 7). Chan does not explicitly disclose means for recording a movie file command in an output 3-D image file or wherein the output 3-D image file contains information for instructing a display software to display a 3-D imagery, so as to be viewable from multiple viewpoints. Rule discloses means for recording a movie file command in an output 3-D image file and wherein the output 3-D image file contains information for instructing a di0.splay software to display a 3-D imagery, so as to be viewable from multiple viewpoints (page 28, paragraph 1; page 47, paragraph 3).

m. Referring to claim 40. Chan discloses means for converting a plurality of graphics instructions into movie file commands (column 3, lines 66 – column 4, lines 7).

n. Referring to claim 41, Chan does not explicitly disclose means for recording a plurality of movie file commands in an output 3-D movie file. Rule discloses means for

recording a plurality of movie file commands in an output 3-D movie file (page 28, paragraph 1; page 47, paragraph 3).

o. Referring to claim 42, Chan does not explicitly disclose wherein the plurality of movie file commands in the output 3-D movie file in a pre-determined sequence. Rule discloses wherein the plurality of movie file commands in the output 3-D movie file in a pre-determined sequence (page 28, paragraph 1; page 47, paragraph 3).

p. Referring to claim 43, Chan does not explicitly disclose wherein the movie file command includes an integer representation of the corresponding graphics instruction and argument data for the graphics instruction. Rule discloses wherein the movie file command includes an integer representation of the corresponding graphics instruction and argument data for the graphics instruction (page 40, paragraph 6).

3. Claims 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chan in view of Rule as applied to claim 1 above further in view of VRML97.

a. Referring to claim 2, Chan does not explicitly disclose generating image commands corresponding to graphics instructions which represent a second 3-D image frame; transferring the image commands representing the second 3-D image frame to the output file; or wherein the output file includes information to instruct the display software to display the first 3-D image frame and the second 3-D image frame into a sequence of 3-D images. However, Chan does disclose generating image commands corresponding to graphics instructions for video applications (column 2, lines 36-50; column 3, line 66 – column 4, line 7). Rule discloses transferring the image commands representing the image frame to the output file (page 28, paragraph 1). VRML97 discloses wherein the

output file includes information to instruct the display software to display the first 3-D image frame and the second 3-D image frame into a sequence of 3-D images (Sect 6.28 Movie Texture). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to further modify the system of Chan by including instructions to display the first 3-D image frame and the second 3-D image frame into a sequence of 3-D images as taught by VRML97 and generating image commands corresponding to graphics instructions which represent a second 3-D image frame. The suggestion/motivation for doing so would have been because it would allow movies to be displayed (VRML97, Sect 6.28 Movie Texture) and because it is necessary to generate a plurality of frames for video data.

4. Claim 8-10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chan in view of Rule as applied to claim 1 above further in view of U.S. Patent 6,429,867 to Deering.

a. Referring to claim 8, Chan does not explicitly disclose streaming the output 3-D image file across a network. Deering discloses streaming the output 3-D image file across a network (column 6, lines 45- 54). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify the teachings of Chan by streaming the output 3-D image file across a network as taught by Deering. The suggestion/motivation for doing so would have been because it would allow the generation and playback of realistic 3D movies while lowering the number of calculations (Deering, column 2, lines 17-21) and facilitate their transmission over networks.

b. Referring to claim 9, Chan does not explicitly disclose the network is the Internet. Deering discloses the network is the Internet (column 6, lines 45- 54).

c. Referring to claim 10, Chan does not explicitly disclose compressing the output file before it is streamed across the network. Deering discloses disclose compressing the output file before it is streamed across the network (column 6, lines 45- 54).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 17-22 and 44-49 is rejected under 35 U.S.C. 102(b) as being anticipated by Rule.

a. Referring to claim 17, Rule discloses a graphics instruction data field that contains reference information corresponding to a single graphics instruction, the single graphics instruction containing information for instructing the display software to display a characteristic of the 3-D image (page 37, source code); an argument data field defining at least one argument, the argument containing data to be used by the single graphics instruction in generating the 3-D image characteristic (page 37, source code).

b. Referring to claim 18, Rule discloses a command size data field defining a size of graphics rendering command, the 3-D movie command including graphics instruction reference information and graphics instruction data (page 39, paragraph 3).

c. Referring to claim 19, Rule discloses wherein the argument data field comprises an argument size data field defining a size of the argument (page 11, paragraph 2).

d. Referring to claim 20, Rule discloses wherein the argument size field includes both data defining the size of the argument and data defining a type of the argument (page 11, paragraph 2).

e. Referring to claim 21, Rule discloses wherein the argument field further comprises an argument data type defining type of the argument (page 11, paragraph 2).

f. Referring to claim 22, Rule discloses at least one frame, the frame including at least one set of command size, graphics call, and argument fields (page 36 and page 37, example VRML file); and a frame header stored in the memory corresponding to each frame, the frame header including general information concerning the frame (page 200, paragraph 1).

g. Signal claims 44-49 recites steps performed by the apparatus claims 17-22; therefore they are similar in scope and rejected under the same rationale.

Allowable Subject Matter

3. Claims 7, 15-16, 23-25, 29-32, 34, 50-52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Linzy McCartney** whose telephone number is **(703) 605-0745**. The examiner can normally be reached on Mon-Friday (8:00AM-5: 30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Mark Zimmerman**, can be reached at **(703) 305-9798**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

ltm
April 2, 2004

MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600